

8. The method of claim 1, wherein the cell is a cancer cell.

- 1 9. The method of claim 8, wherein the cancer is selected from the
2 group consisting of lung cancer, breast cancer, bladder cancer, thyroid cancer, liver
3 cancer, lung cancer, pleural cancer, pancreatic cancer, ovarian cancer, cervical cancer,
4 colon cancer, fibrosarcoma, neuroblastoma, glioma, melanoma, monocytic leukemia, and
5 myelogenous leukemia.
- 1 10. The method of claim 1, wherein the cell is an inflammatory cell.
- 1 11. The method of claim 1, wherein the lethal factor polypeptide is
2 native lethal factor.
- 1 12. The method of claim 1, wherein the compound is native lethal
2 factor.
- 1 13. The method of claim 1, wherein the lethal factor polypeptide is
2 linked to a heterologous compound.
- 1 14. The method of claim 13, wherein the compound is shiga toxin, A
2 chain of diphtheria toxin, or *Pseudomonas* exotoxin A.
- 1 15. The method of claim 13, wherein the compound is a detectable
2 moiety.
- 1 16. The method of claim 13, wherein the compound is a nucleic acid.
- 1 17. The method of claim 13, wherein the compound is covalently
2 linked to lethal factor via a chemical bond.
- 1 18. The method of claim 13, wherein the heterologous compound is
2 recombinantly linked to lethal factor.
- 1 19. The method of claim 1, wherein the compound is a diagnostic or a
2 therapeutic agent.
- 1 20. The method of claim 1, wherein the cell is a human cell.
- 1 21. The method of claim 1, wherein the mutant protective antigen
2 protein is a fusion protein comprising a heterologous receptor binding domain.

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1 22. The method of claim 21, wherein the heterologous receptor binding
2 domain is selected from the group consisting of a single chain antibody and a growth factor.

1 23. An isolated mutant protective antigen protein comprising a matrix
2 metalloproteinase or a plasminogen activator-recognized cleavage site in place of the native
3 protective antigen furin-recognized cleavage site, wherein the mutant protective antigen is
4 cleaved by a matrix metalloproteinase or a plasminogen activator.

1 24. The method of claim 23, wherein the matrix metalloproteinase or a
2 plasminogen activator-recognized cleavage site is selected from the group consisting
3 PCPGRVVGG (SEQ ID NO:4), PGSGRSA (SEQ ID NO:5), PGSGKSA (SEQ ID NO:6),
4 PQRGRSA (SEQ ID NO:7), GPLGMLSQ (SEQ ID NO:2) and GPLGLWAQ (SEQ ID
5 NO:3).